

AOC 01  
5/13/88  
Stringfellow Site

SFUND RECORDS CTR  
2970-01311

SDMS # 31223

United States Environmental Protection Agency  
Region 9

In the Matter of :

J.B. Stringfellow, Jr.;  
Stringfellow Quarry Company;  
Stringfellow Quarry Co., Inc.,  
E. Moe McCook;  
Standard Dredging Corporation;  
Paul Hubbs;  
Lucille Hubbs;  
Montrose Chemical Corporation of California;  
Rohr Industries, Inc.;  
Stauffer Chemical Company;  
Alumax, Inc.;  
General Steel & Wire Co.;  
Quantum Chemical Corporation (formerly  
known as National Distillers & Chemical Corp);  
NI Industries, Inc.;  
Rockwell International Corporation;  
McDonnell Douglas Corporation;  
Alcan Aluminum Corporation;  
Quetmetco, Inc.;  
Weyerhaeuser Company;  
The Deutsch Company;  
General Electric Co.;  
Northrop Corporation;  
Rainbow Canyon Manufacturing Corp.;  
Rheem Manufacturing Co.,

Order No.88-14

RESPONDENTS,

Proceeding under Section 106 of the  
Comprehensive Environmental Response,  
Compensation and Liability Act of 1980,  
as amended by the Superfund Amendments  
and Reauthorization Act of 1986,  
(42 U.S.C. §9606)

ADMINISTRATIVE ORDER



1 I. Jurisdiction

2 This Order is issued to: J.B. Stringfellow, Jr.; Stringfel-  
3 low Quarry Company; Stringfellow Quarry Co., Inc.; E. Moe McCook;  
4 Standard Dredging Corporation; Paul Hubbs; Lucille Hubbs;  
5 Montrose Chemical Corporation of California; Rohr Industries;  
6 Inc.; Stauffer Chemical Company; Alumax, Inc.; General Steel &  
7 Wire Co.; Quantum Chemical Corporation (formerly known as Na-  
8 tional Distillers & Chemical Corp); NI Industries, Inc.; Rockwell  
9 International Corporation; McDonnell Douglas Corporation; Alcan  
10 Aluminum Corporation; Quetmetco, Inc.; Weyerhaeuser Company;  
11 The Deutsch Company; General Electric Co.; Northrop Corporation;  
12 Rainbow Canyon Manufacturing Corp.; Rheem Manufacturing Co.;  
13 (Respondents) pursuant to the Comprehensive Environmental  
14 Response, Compensation and Liability Act of 1980, as amended by  
15 the Superfund Amendments and Reauthorization Act of 1986, by  
16 authority delegated to the Administrator of the United States En-  
17 vironmental Protection Agency (EPA), and redelegated to the EPA  
18 Regions.

19 The Director of the Toxics and Waste Management Division,  
20 EPA Region 9, has determined that there may be an imminent and  
21 substantial endangerment to the public health, welfare or the en-  
22 vironment because of the release and threatened release of haz-  
23 ardous substances from the Stringfellow Superfund Site located  
24 near Glen Avon, California.

25 This Order directs Respondents to undertake actions that EPA  
26 has determined to be necessary to protect the public and the en-  
27 vironment from this potential endangerment.



## II. Findings of Fact

The following facts are a synopsis of data collected in the Administrative Records for the July 18, 1984 and June 25, 1987 Stringfellow Records of Decision. Those Administrative Records and Records of Decision are incorporated by reference as if fully set out in this Order.

A. From 1956 to 1972, more than 200 persons and entities disposed or arranged for the disposal of approximately 33.9 million gallons of hazardous substances at a 17 acre site in Riverside County, California, approximately 50 miles east of Los Angeles. The site was referred to locally (and will be referred to in this Order) as the Stringfellow Acid Pits. The site is located in Pyrite Canyon, five miles northwest of the city of Riverside, near the community of Glen Avon. The community of Glen Avon, which has approximately 7760 residents, lies at the mouth of Pyrite Canyon, approximately one mile southwest of the site. Potential exposure to Stringfellow contaminants also threatens approximately 57,000 residents of the Jurupa Regional Statistical Area and approximately 5,000 non-residents who work in the area.

B. Approximately 33.9 million gallons of wastes containing hazardous substances were disposed of at the Acid Pits. The substances included, without limitation:

- \* trichloroethylene,
- \* chloroform,
- \* dichloromethane,
- \* cadmium,
- \* chromium,



1       \* tetrachloroethylene,  
2       \* toluene,  
3       \* phenol, and  
4       \* dichlorobenzene.

5   Large volumes of these hazardous substances were released into  
6   the environment at the site in highly concentrated acidic solu-  
7   tions.

8       Some of the contaminants have migrated downgradient from the  
9   site in a plume that extends into the community area of Glen  
10   Avon. The contaminant plume is approximately 300 feet wide in  
11   Pyrite Canyon and increases to about 900 feet wide in the com-  
12   munity area. The plume is migrating in a southwesterly direction  
13   from the mouth of the Canyon at an estimated rate of 250 feet per  
14   year. The plume presently extends approximately 11-12,000 feet  
15   south of the site. Some of the hazardous substances have been  
16   detected in the soil and groundwater at and downgradient of the  
17   site at levels far in excess of National Interim Primary Drinking  
18   Water Standards and Ambient Water Quality Criteria. Soil con-  
19   tamination has and will continue to contribute to groundwater  
20   contamination as the hazardous substances continue to migrate  
21   from the soil into the groundwater. In addition, the plume of  
22   contaminated groundwater continues to migrate toward actual and  
23   potential human drinking water supplies. The following paragraphs  
24   set out known health effects for certain of the detected hazard-  
25   ous substances.

26  
27



1       C. Trichloroethylene (TCE) is a known animal and suspected  
2 human carcinogen. TCE is a solvent which can act as an anes-  
3 thetic, depressing the central nervous system. It can also cause  
4 neurological impairment, liver and kidney damage, and at high  
5 concentrations, death.

6       TCE has been found in groundwater samples taken on site at  
7 the Stringfellow site in well OW-1 in concentrations of ap-  
8 proximately 11,000 parts per billion (ppb). TCE concentrations of  
9 approximately 5500 ppb have been detected in the mid-canyon area  
10 approximately 1130 feet downgradient of the site in well MW-7B,  
11 and TCE concentrations of approximately 100 ppb have been  
12 detected in Glen Avon approximately 6950 feet downgradient of the  
13 site in well FC251A2. EPA estimates that TCE in concentrations  
14 of 3 ppb would cause one cancer death per million people among  
15 exposed populations. Concentrations in excess of 3 ppb are ex-  
16 pected to cause more cancer deaths in an exposed population. The  
17 Maximum Contaminant Level (MCL) (set under the Safe Drinking  
18 Water Act) for TCE in drinking water is 5 ppb.

19       Chloroform is a known animal and suspected human carcinogen.  
20 It may also be mutagenic and cause birth defects. Chloroform can  
21 cause liver and kidney damage, headaches, unconsciousness and  
22 death. Chloroform has been found in groundwater samples taken at  
23 the Stringfellow site, in well OW-1, at concentrations of ap-  
24 proximately 1300 ppb, in samples taken approximately 1130 feet  
25 downgradient, in well MW-7B, at concentrations of approximately  
26 600 ppb, and in samples taken in Glen Avon, approximately 6950  
27 feet downgradient of the site, in well FC251A2, at concentrations



1 of approximately 4.6 ppb. EPA estimates that concentrations of  
2 chloroform of 0.43 ppb would cause one cancer death per million  
3 people in exposed populations. Exposure to greater concentra-  
4 tions would be expected to cause more cancer deaths in an exposed  
5 population.

6 Dichloromethane is a known animal and suspected human car-  
7 cinogen. It is also known to cause mutations in animals. Acute  
8 exposure to dichloromethane produces narcotic effects, nausea,  
9 lassitude, headaches, labored breathing, unconsciousness and  
10 death in humans. Chronic exposure can also produce behavioral and  
11 nervous systems disorders in humans, leading to suicide.

12 Dichloromethane has been found on site in well OW-1 in concentra-  
13 tions of approximately 4400 ppb. EPA estimates that a concentra-  
14 tion level of approximately 5 ppb would cause one cancer death  
15 per million people in exposed populations. Exposure to higher  
16 concentrations would be expected to cause more cancer deaths in  
17 an exposed population.

18 Cadmium is a known animal and suspected human carcinogen. It  
19 is also suspected to cause mutations and birth defects. It has  
20 been detected on site, in well OW-1, at concentrations of 4150  
21 ppb and in in well MW-4B, approximately 430 feet downgradient of  
22 the site, at concentrations of approximately 3060 ppb. The MCL  
23 for cadmium in drinking water is 10 ppb.

24 Chromium, in certain compounds, is a known human carcinogen,  
25 a suspected mutagen, and can cause liver and kidney damage.  
26 Chromium has been detected in groundwater on site at concentra-  
27 tions estimated at 200,000 ppb in well OW-1, and in groundwater



1 approximately 430 feet downgradient of the site in concentrations  
2 of approximately 14,100 ppb in well MW-4B. The MCL for chromium  
3 in drinking water is 50 ppb.

4 D. The Stringfellow Acid Pits site was listed on the Interim  
5 National Priorities List (NPL) of hazardous waste sites in Oc-  
6 tober 1981, was proposed for the NPL on December 1982, and was  
7 placed on the final list, after public comment, on September 8,  
8 1983.

9 III. Conclusions of Law

10 A. Respondents are "persons" as defined in Section 101(21)  
11 of CERCLA, 42 U.S.C. §9601(21).

12 B. The Stringfellow Acid Pits Site is a "facility" as  
13 defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

14 C. The substances identified in Section II of this order are  
15 "hazardous substances" as defined in Section 101(14) of CERCLA,  
16 42 U.S.C. § 9601(14).

17 D. The disposal of hazardous substances and the continued  
18 migration of those substances to the groundwater from con-  
19 taminated soils constitute a "release" or "threatened release" of  
20 hazardous substances into the environment as defined in Section  
21 101(22) of CERCLA, 42 U.S.C. § 9601(22).

22 E. Respondents are liable under Section 107(a)(3) of CERCLA,  
23 42 U.S.C. § 9607(a)(3).



1 IV. Determinations

2 The Director, Toxics and Waste Management Division, EPA  
3 Region 9, has made the following determinations. These determina-  
4 tions are fully supported by the July 18, 1984 Record of Decision  
5 and its Administrative Record and are confirmed by the June 25,  
6 1987 Record of Decision and its Administrative Record.

7 A. The release or threatened release of hazardous substances  
8 from the Acid Pits may present an imminent and substantial endan-  
9 germent to the public health, welfare, or the environment. (See  
10 Exhibit A.)

11 B. In order to prevent or mitigate immediate and significant  
12 risk of harm to human health and the environment, immediate ac-  
13 tion must be undertaken to extract and treat the contaminated  
14 groundwater emanating from the Stringfellow facility.

15 V. Order

16 Based upon the Findings of Fact, Conclusions of Law and  
17 Determinations, Respondents are hereby Ordered to implement the  
18 following measures under the direction of EPA.

19 A. Within sixty (60) calendar days of receipt of the RFP  
20 "Operation and Maintenance of the Stringfellow Groundwater  
21 Pretreatment Plant, Riverside County, California," or the effec-  
22 tive date of this Order, whichever is later, Respondents shall  
23 submit a Transition Plan and Labor Plan providing for the con-  
24 tinued operation by Respondents of the Stringfellow groundwater  
25 pretreatment plant and associated groundwater extraction systems.  
26 The Transition Plan and Labor Plan must incorporate the minimum  
27 requirements outlined in the RFP. Respondents' Transition Plan





1 must include a detailed description of a funding and contracting  
2 mechanism that will permit Respondents to coordinate their im-  
3 plementation of this Order.

4 B. Within thirty (30) calendar days of EPA's approval of  
5 Respondents' Transition Plan and Labor Plan, Respondents shall  
6 begin operation of the groundwater pretreatment plant and as-  
7 sociated groundwater extraction systems described in the RFP.  
8 The Respondents shall operate the pretreatment plant and extrac-  
9 tion systems pursuant to the plans, procedures and requirements  
10 developed by EPA, the Army Corps of Engineers and its contractor,  
11 and all requirements imposed by the Santa Ana Watershed Project  
12 Authority (SAWPA). These plans are primarily based on the re-  
13 quirements outlined in the RFP and include but are not limited  
14 to: Labor Plan; Transition Plan; Maintenance Plan; On-site  
15 Facilities Plan; Operation Plan; Safety, Health and Emergency  
16 Response Plan; Sampling, Analysis, and Quality Management Plan  
17 IFP; Site Access and Security Plan; Operation and Maintenance  
18 Manual. EPA shall provide the Respondents with copies of the ex-  
19 isting plans upon EPA approval of Respondents' Transition Plan  
20 and Labor Plan, pursuant to Subsection A. Respondents shall also  
21 comply with any applicable state and EPA requirements and proce-  
22 dures concerning health and safety and site access.

23 C. Within sixty (60) calendar days of the beginning of the  
24 transition period as identified in the EPA approved Transition  
25 Plan, Respondents shall submit a proposal for any changes and up-  
26 dates to any plans and procedures identified in Subparagraph B.,  
27 above.



1           D. Within thirty (30) calendar days of EPA's approval of  
2 any proposed changes and updates made pursuant to Subparagraph  
3 C., Respondents shall provide EPA revised plans incorporating  
4 those changes.

5           E. Upon initiation of the transition period approved of by  
6 EPA in the Respondents' Transition Plan, Respondents shall begin  
7 providing EPA with Monthly Reports. These Monthly Reports shall  
8 meet the requirements outlined in the SAWPA discharge permit and  
9 shall be consistent with the reports entitled "Stringfellow  
10 Pretreatment Plant Monthly Report" presently being submitted to  
11 EPA by the Army Corps of Engineers. EPA shall provide Respon-  
12 dents with a copy of the SAWPA permit and a recent monthly report  
13 as an example upon EPA approval of Respondents' Transition Plan.  
14 The Monthly Reports shall be submitted to EPA no later than the  
15 5th day of each calendar month. The Monthly Reports shall also  
16 serve as progress reports and shall describe all actions taken to  
17 comply with this Administrative Order and shall also be used to  
18 raise issues or bring any problems to EPA's attention.

19                           VI. Compliance With Other Laws

20           Respondents shall comply with all federal, state and local  
21 laws and regulations in carrying out the terms of this Order. All  
22 hazardous substances removed from the facility must be handled in  
23 accordance with the Resource Conservation and Recovery Act of  
24 1976, 42 U.S.C. § 6921, et seq., the regulations promulgated un-  
25 der that Act and EPA's Offsite Disposal Policy (attached as Ex-  
26 hibit B).



VII. Project Coordinator

EPA has appointed a Project Coordinator for the site who has the authority vested in the On-Scene Coordinator by 40 C.F.R. § 300 et seq., including such authority as may be added by amendments to 40 C.F.R. §300, as well as the authority to ensure that this Order is implemented in accordance with all applicable statutes and regulations. If the EPA On-Scene Coordinator and the EPA Project Coordinator are two different individuals, EPA will make its best efforts to coordinate any direction given to the Respondents by the On-Scene Coordinator and the EPA Project Coordinator. The EPA Project Coordinator for the Stringfellow Site for the purpose of this Order is:

Phil Bobel  
Superfund Programs Branch Chief, T-4  
United States Environmental Protection Agency  
Region 9  
215 Fremont Street  
San Francisco, California 94105  
(415) 974-8910

Within thirty (30) calendar days of the effective date of this Order, Respondents shall designate a Project Coordinator to monitor Respondents' progress in implementing this order, to coordinate communication between EPA and the Respondents, and to oversee implementation of this Order. EPA and Respondents may change their respective Project Coordinators upon five (5) calendar days written notice.



VIII. Submittals

All submittals and notifications to EPA required by this Order shall be made to:

Director, Toxics and Waste Management Division  
United States Environmental Protection Agency  
Region 9  
215 Fremont Street  
San Francisco, California 94105

Copies of all submittals and notifications shall be sent to the EPA Project Coordinator.

All approvals and decisions of EPA made regarding submittals and modifications under this Order will be communicated to Respondents by the Director, Toxics and Waste Management Division, or his designee. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, or any other matter will relieve Respondents of their obligation to obtain formal approvals as required by this Order.

IX. Access

Respondents shall provide EPA employees, California Department of Health Services (DHS) employees, Army Corps of Engineers employees, SAWPA employees and their authorized representatives with complete access to the facility at all times. Nothing in this Order limits any access rights that EPA or other agencies have pursuant to law.

X. Endangerment During Implementation

The Director, Toxics and Waste Management Division, EPA Region 9, may determine that acts or circumstances (whether related to or unrelated to this Order) may endanger human health, welfare or the environment and may order Respondents to stop fur-



1 ther implementation of this Order until the endangerment is  
2 abated. This provision does not affect or limit the provisions of  
3 Section XII(B)., infra.

4 XI. United States Not Liable

5 The United States, its agencies, employees and other repre-  
6 sentatives, shall not be liable for any injuries or damages to  
7 persons or property resulting from the acts or omissions of  
8 Respondents, their employees, or other representatives caused by  
9 implementation of this Order. The United States, its agencies,  
10 employees, and other representatives, are not parties to any con-  
11 tract with Respondents.

12 XII. Noncompliance

13 A. A willful violation or failure or refusal to comply with  
14 this Order shall subject Respondents to a civil penalty of up to  
15 \$25,000 per day in which the violation occurs or failure to  
16 comply continues, pursuant to the provisions of Section 106(b)(1)  
17 of CERCLA, 42 U.S.C. §9606(b)(1). Failure to comply with this Or-  
18 der without sufficient cause shall also subject Respondents to  
19 punitive damages of up to three times the total costs incurred by  
20 the United States for site response pursuant to Section 107(c)(3)  
21 of CERCLA, 42 U.S.C. §9607(c)(3).

22 B. EPA may take over the work required by this Order if EPA  
23 determines that Respondents are not taking appropriate action.  
24 EPA may order additional actions it deems necessary to protect  
25 public health, welfare, or the environment.



1                                   XIII. Opportunity to Confer

2           Respondents may request a conference with the Director,  
3   Toxics and Waste Management Division, EPA Region 9, or his staff  
4   to discuss the provisions of this Order. At any conference held  
5   pursuant to Respondents request, Respondents may appear in person  
6   or by counsel or other representatives for the purpose of  
7   presenting any objections, defenses or contentions which Respon-  
8   dents may have regarding this Order. If Respondents desire such a  
9   conference, Respondents must make a request orally within ten  
10  (10) days of receipt or the effective date of this Order,  
11  whichever is later, and confirm the request in writing im-  
12  mediately. If more than one Respondent requests a conference, EPA  
13  may schedule the conferences together for mutual convenience. The  
14  conference will be recorded by a certified court reporter.

15                                   XIV. Parties Bound

16           This Order shall apply to and is binding upon Respondents,  
17  their officers, directors, agents, employees, contractors, suc-  
18  cessors, and assigns.

19                                   XV. Notice of Intent to Comply

20           Within thirty (30) days of receipt or the effective date of  
21  this Order, whichever is later, Respondents shall orally inform  
22  EPA of their unequivocal and unconditional intent to comply with  
23  the terms of this Order. This oral notice shall be confirmed  
24  within three (3) days by written notice to the Director. Failure  
25  to timely notify EPA of intent to comply shall be deemed a  
26  refusal to comply.



1 XVI. Notice to State

2 Notice of the issuance of this Order has been given to the  
3 State of California. EPA will consult with the California Depart-  
4 ment of Health Services, as appropriate, to ensure that the plans  
5 submitted by Respondents are consistent with State requirements.

6 XVII. Effective Date

7 Notwithstanding any conferences that may be requested pur-  
8 suant to the provisions of this Order, this Order is effective on  
9 May 28, 1988.

10  
11 IT IS SO ORDERED at San Francisco, California, on this 13<sup>th</sup> day  
12 of May, 1988.

13 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

14  
15 by: Jeff Zelikson  
16 Director, Toxics and Waste Management Division  
17 EPA, Region 9  
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1 Exhibit A  
2 DETERMINATION OF IMMINENT AND SUBSTANTIAL ENDANGERMENT

3 SITE: Stringfellow Acid Pits, Glen Avon, California.

4 DOCUMENTS REVIEWED:

5 My determination is based on the Environmental Protection  
6 Agency (EPA) Administrative Records for the Record of Decision  
7 for the Stringfellow Pretreatment Plant, dated July 18, 1984 and  
the Record of Decision for Early Implementation Actions at the  
Stringfellow Site dated June 25, 1987. These Administrative  
Records are incorporated by reference as if fully set forth  
herein.


8 DETERMINATION:

9 Section 106(a) of the Comprehensive Environmental Response,  
10 Compensation and Liability Act of 1980, as amended by the Super-  
11 fund Amendments and Reauthorization Act of 1986 (CERCLA),  
12 provides that when the President of the United States determines  
13 that there may be an imminent and substantial endangerment to the  
public health, welfare, or the environment because of an actual  
or threatened release of a hazardous substance from a facility to  
the environment, he may issue such Orders as may be necessary to  
protect public health, welfare or the environment.

14 The July 18, 1984 Administrative Record mentioned above con-  
15 clusively demonstrates that hazardous substances have been  
16 released into the environment from the site. The June 25, 1987  
17 Administrative Record confirms the facts and analysis of the 1984  
18 Records. This conclusion is clearly demonstrated by the  
19 "Endangerment Assessment" contained in chapter 3 of the May 18,  
1984, "Fast-Track Remedial Investigation/Feasibility Study" and  
supported by the "Public Health Evaluation" contained in chapter  
7 of the June 1, 1987, "Draft Final Remedial Investigation  
Report" contained in the Administrative Record for the 1987  
Record of Decision.

20 Pursuant to the CERCLA §106 authority delegated to me by the  
21 President, through the EPA Administrator, I determine that the  
22 Administrative Records and, specifically the Endangerment Assess-  
23 ment and the Public Health Evaluation, demonstrate that an im-  
minent and substantial endangerment to human health, welfare, or  
the environment may exist because of the actual and threatened  
releases of hazardous substances at the Stringfellow Site.

24 Dated at San Francisco, California, this 13<sup>th</sup> day of May,  
1988.

25   
26 Jeff Zelikson, Director,  
27 Toxics Waste and Management  
Division, U.S. Environmental  
Protection Agency, Region 9

